



# RSP450D-120

## 450W Monocrystalline Solar Panel

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### Key Features

The Renogy 450-Watt Monocrystalline Solar Panel features substantial conversion efficiency and immense power output. This solar panel is equipped with high efficiency (PERC) monocrystalline silicon solar cells, providing both cost savings and better power output performance. This product promotes renewable energy deployment.

- Half-cut cell configuration with PERC technology
- High module conversion efficiency
- Quick and inexpensive mounting
- 100% EL testing on all Renogy modules
- No hot spots guaranteed

### Potential Uses

Renogy solar panels are used in solar power arrays, water pumping systems, signaling systems and in plenty other applications. The Renogy 450 W Monocrystalline Solar Panel is ideal for larger sized solar array power systems, and heavy power consumption applications.



Power Output Warranty



Material and Workmanship Warranty

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### Electrical Data

Maximum Power at STC*	450 W
Open Circuit Voltage ( $V_{oc}$ )	41.25 V
Short Circuit Current ( $I_{sc}$ )	13.89 A
Optimum Operating Voltage ( $V_{mp}$ )	34.67 V
Optimum Operating Current ( $I_{mp}$ )	12.98 A
Module Efficiency	20.8 %
Maximum System Voltage	1500 VDC
Maximum Series Fuse Rating	25 A

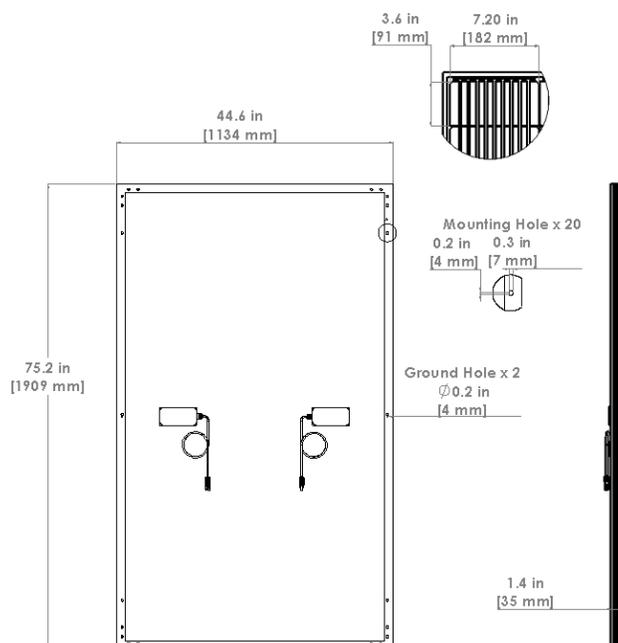
### Thermal Characteristics

Operating Module Temperature	-40°F to 185 °F
Nominal Operating Cell Temperature (NOCT)	45±2 °C
Temperature Coefficient of Pmax	-0.39 %/°C
Temperature Coefficient of Voc	-0.3 %/°C
Temperature Coefficient of Isc	0.06 %/°C

### Junction Box

Degree of Protection	IP65 / IP68 (1m, 1h)
Diode Type Number of	FMK4530T
Diodes Output Cables	3 Diode(s) 12 AWG (1 ft long)

### Module Diagram



### Mechanical Data

Solar Cell Type	PERC Monocrystalline (7.2 x 3.6 in)
Number of Cells	120 (6 x 20), 60 cells in series
Dimensions	75.2 x 44.6 x 1.4 in (1909 x 1134 x 35 mm)
Weight	52.7 lb (23.9 kg)
Front Glass	Tempered Glass 0.13 in (3.2 mm)
Frame	Anodized Aluminium Alloy
Connectors	Solar Connectors
Fire Rating	Class C

### MC4001 - Solar Connectors

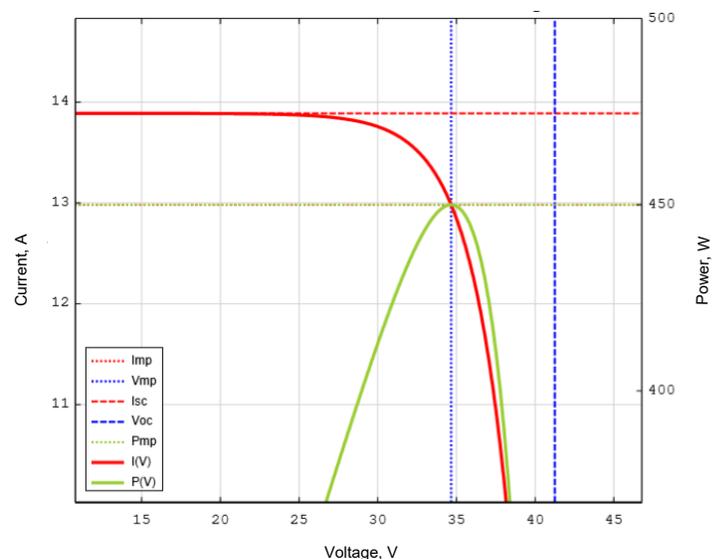
Rated Current	35 A
Maximum Voltage	1500 VDC
Maximum AWG Size Range	10 AWG
Temperature Range	-40°F to 185°F
IP Rating	IP65 / IP68 (1m, 1h)

### Certifications



### IV-Curve

RSP450D-120 Characteristics versus Voltage



\*All specifications and data described in this data sheet are tested under Standard Test Conditions (STC - Irradiance: 1000W/m<sup>2</sup>, Temperature: 25°C, Air Mass: 1.5) and may deviate marginally from actual values. Renogy and any of its affiliates has reserved the right to make any modifications to the information on this data sheet without notice. It is our goal to supply our customers with the most recent information regarding our products. These data sheets can be found in the downloads section of our website, [www.renogy.com](http://www.renogy.com)